



#5

Sequence Listing.ST25.txt  
SEQUENCE LISTING

&lt;110&gt; Novartis AG

&lt;120&gt; Selectable Marker Genes

&lt;130&gt; 4-31193A

&lt;160&gt; 10

&lt;170&gt; PatentIn version 3.0

&lt;210&gt; 1

&lt;211&gt; 2607

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 1

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20gttgaagaag tggctacttt catgtgtgca gtggaatcct acccccagcc tgagatttcc 1  
80tggaactagaa ataaaattct cattaaactc tttgacaccc ggtacagcat ccggggagaat 2  
40gggcagctcc tcaccatcct gagtgtggaa gacagtgatg atggcattta ctgctgcacg 3  
00gccaacaatg gtgtgggagg agctgtggag agttgtggag ccctgcaagt gaagatgaaa 3  
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20ccatgtacta caatgggtaa tcccaaacca tcagtgtctt ggataaaggg agacagccct 4  
80ctcagggaaa attcccgaat tgcagttctt gaatctggga gcttgaggat tcataacgta 5  
40caaaaggaag atgcaggaca gtatcgatgt gtggcaaaaa acagcctcgg gacagcatat 6  
00

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tccaaagtgg tgaagctgga atttgagggt tttgccagga tcctgcgggc tcctgaatcc 6  
 60  
 cacaatgtca cctttggctc ctttgtgacc ctgcactgta cagcaacagg cattcctgtc 7  
 20  
 cccaccatca cctggattga aaacggaaat gctgtttctt ctgggtccat tcaagagagt 7  
 80  
 gtgaaagacc gagtgattga ctcaagactg cagctgttta tcaccaagcc aggactctac 8  
 40  
 acatgcatag ctaccaataa gcatggggag aagttcagta ctgccaaggc tgcagccacc 9  
 00  
 atcagcatag cagaatggag taaaccacag aaagataaca aaggctactg cgcccagtac 9  
 60  
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 20  
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 80  
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 40  
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 gtaaaggagc tcttctgctc aaaagaatgg ctggtaatgg aagagaagac ccacagagga 12  
 60  
 ctctacagat ccgagatgca tttgctgtcc gtgccaaaat gcagcaagct tcccagcatg 13  
 20  
 cattgggacc ccacggcctg tgccagactg ccacatctag attataacaa agaaaaccta 13  
 80  
 aaaacattcc caccaatgac gtcctcaaag ccaagtgtgg acattccaaa tctgccttcc 14  
 40  
 tcctcctctt cttccttctc tgtctcacct acatactcca tgactgtaat aatctccatc 15  
 00  
 atgtccagct ttgcaatatt tgtgcttctt accataacta ctctctattg ctgccgaaga 15  
 60

CI

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agaaaacaat ggaaaaataa gaaaagagaa tcagcagcag taaccctcac cacactgcct 20	16
tctgagctct tactagatag acttcatccc aaccccatgt accagaggat gccgctcctt 80	16
ctgaacccca aattgctcag cctggagtat ccaaggaata acattgaata tgtgagagac 40	17
atcggagagg gagcgtttgg aagggtgttt caagcaaggg caccaggctt acttccttat 00	18
gaacctttca ctatggtggc agtaaagatg ctcaaagaag aagcctcggc agatatgcaa 60	18
gcggactttc agagggaggc agccctcatg gcagaatttg acaaccctaa cattgtgaag 20	19
ctattaggag tgtgtgctgt cgggaagcca atgtgcctgc tctttgaata catggcctat 80	19
ggtgacctca atgagttcct ccgcagcatg tcccctcaca ccgtgtgcag cctcagtcac 40	20
agtgacttgt ctatgagggc tcaggtctcc agccctgggc cccaccctct ctctgtgct 00	21
gagcagcttt gcattgccag gcaggtggca gctggcatgg cttacctctc agaacgtaag 60	21
ttgtttcacc gagatttagc caccaggaac tgccctgggtg gcgagaacat ggtggtgaaa 20	22
attgccgact ttggcctctc caggaacatc tactcagcag actactacaa agctaataaa 80	22
aacgacgcta tccctatccg ttggatgcca ccagagtcca ttttttataa ccgtacact 40	23
acagagtctg atgtgtgggc ctatggcgtg gtcctctggg agatcttctc ctatggcctg 00	24
cagccctact atgggatggc ccatgaggag gtcatttact acgtgcgaga tggcaacatc 60	24
ctctcctgcc ctgagaactg ccccggtggag ctgtacaatc tcatgcgtct atgttggagc 20	25

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Sequence Listing.ST25.txt

aagctgcctg cagacagacc cagtttcacc agtattcacc gaattctgga acgcatgtgt 25  
80

gagagggcag aggggaactgt gagtgtc 26  
07

<210> 2  
<211> 869  
<212> PRT  
<213> homo sapiens

<400> 2

Met	Arg	Glu	Leu	Val	Asn	Ile	Pro	Leu	Val	His	Ile	Leu	Thr	Leu	Val
1				5					10					15	
Ala	Phe	Ser	Gly	Thr	Glu	Lys	Leu	Pro	Lys	Ala	Pro	Val	Ile	Thr	Thr
			20					25					30		
Pro	Leu	Glu	Thr	Val	Asp	Ala	Leu	Val	Glu	Glu	Val	Ala	Thr	Phe	Met
		35					40					45			
Cys	Ala	Val	Glu	Ser	Tyr	Pro	Gln	Pro	Glu	Ile	Ser	Trp	Thr	Arg	Asn
	50					55					60				
Lys	Ile	Leu	Ile	Lys	Leu	Phe	Asp	Thr	Arg	Tyr	Ser	Ile	Arg	Glu	Asn
65					70					75				80	
Gly	Gln	Leu	Leu	Thr	Ile	Leu	Ser	Val	Glu	Asp	Ser	Asp	Asp	Gly	Ile
				85					90					95	
Tyr	Cys	Cys	Thr	Ala	Asn	Asn	Gly	Val	Gly	Gly	Ala	Val	Glu	Ser	Cys
			100					105					110		
Gly	Ala	Leu	Gln	Val	Lys	Met	Lys	Pro	Lys	Ile	Thr	Arg	Pro	Pro	Ile
		115					120					125			
Asn	Val	Lys	Ile	Ile	Glu	Gly	Leu	Lys	Ala	Val	Leu	Pro	Cys	Thr	Thr
	130					135					140				
Met	Gly	Asn	Pro	Lys	Pro	Ser	Val	Ser	Trp	Ile	Lys	Gly	Asp	Ser	Pro
145					150					155				160	
Leu	Arg	Glu	Asn	Ser	Arg	Ile	Ala	Val	Leu	Glu	Ser	Gly	Ser	Leu	Arg
				165					170					175	
Ile	His	Asn	Val	Gln	Lys	Glu	Asp	Ala	Gly	Gln	Tyr	Arg	Cys	Val	Ala

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## Sequence Listing.ST25.txt

180	185	190
Lys Asn Ser Leu Gly Thr Ala Tyr Ser Lys Val Val Lys Leu Glu Phe 195 200 205		
Glu Val Phe Ala Arg Ile Leu Arg Ala Pro Glu Ser His Asn Val Thr 210 215 220		
Phe Gly Ser Phe Val Thr Leu His Cys Thr Ala Thr Gly Ile Pro Val 225 230 235 240		
Pro Thr Ile Thr Trp Ile Glu Asn Gly Asn Ala Val Ser Ser Gly Ser 245 250 255		
Ile Gln Glu Ser Val Lys Asp Arg Val Ile Asp Ser Arg Leu Gln Leu 260 265 270		
Phe Ile Thr Lys Pro Gly Leu Tyr Thr Cys Ile Ala Thr Asn Lys His 275 280 285		
Gly Glu Lys Phe Ser Thr Ala Lys Ala Ala Ala Thr Ile Ser Ile Ala 290 295 300		
Glu Trp Ser Lys Pro Gln Lys Asp Asn Lys Gly Tyr Cys Ala Gln Tyr 305 310 315 320		
Arg Gly Glu Val Cys Asn Ala Val Leu Ala Lys Asp Ala Leu Val Phe 325 330 335		
Leu Asn Thr Ser Tyr Ala Asp Pro Glu Glu Ala Gln Glu Leu Leu Val 340 345 350		
His Thr Ala Trp Asn Glu Leu Lys Val Val Ser Pro Val Cys Arg Pro 355 360 365		
Ala Ala Glu Ala Leu Leu Cys Asn His Ile Phe Gln Glu Cys Ser Pro 370 375 380		
Gly Val Val Pro Thr Pro Ile Pro Ile Cys Arg Glu Tyr Cys Leu Ala 385 390 395 400		
Val Lys Glu Leu Phe Cys Ala Lys Glu Trp Leu Val Met Glu Glu Lys 405 410 415		
Thr His Arg Gly Leu Tyr Arg Ser Glu Met His Leu Leu Ser Val Pro 420 425 430		
Lys Cys Ser Lys Leu Pro Ser Met His Trp Asp Pro Thr Ala Cys Ala		

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## Sequence Listing.ST25.txt

435

440

445

Arg Leu Pro His Leu Asp Tyr Asn Lys Glu Asn Leu Lys Thr Phe Pro  
 450 455 460

Pro Met Thr Ser Ser Lys Pro Ser Val Asp Ile Pro Asn Leu Pro Ser  
 465 470 475 480

Ser Ser Ser Ser Ser Phe Ser Val Ser Pro Thr Tyr Ser Met Thr Val  
 485 490 495

Ile Ile Ser Ile Met Ser Ser Phe Ala Ile Phe Val Leu Leu Thr Ile  
 500 505 510

Thr Thr Leu Tyr Cys Cys Arg Arg Arg Lys Gln Trp Lys Asn Lys Lys  
 515 520 525

Arg Glu Ser Ala Ala Val Thr Leu Thr Thr Leu Pro Ser Glu Leu Leu  
 530 535 540

Leu Asp Arg Leu His Pro Asn Pro Met Tyr Gln Arg Met Pro Leu Leu  
 545 550 555 560

Leu Asn Pro Lys Leu Leu Ser Leu Glu Tyr Pro Arg Asn Asn Ile Glu  
 565 570 575

Tyr Val Arg Asp Ile Gly Glu Gly Ala Phe Gly Arg Val Phe Gln Ala  
 580 585 590

Arg Ala Pro Gly Leu Leu Pro Tyr Glu Pro Phe Thr Met Val Ala Val  
 595 600 605

Lys Met Leu Lys Glu Glu Ala Ser Ala Asp Met Gln Ala Asp Phe Gln  
 610 615 620

Arg Glu Ala Ala Leu Met Ala Glu Phe Asp Asn Pro Asn Ile Val Lys  
 625 630 635 640

Leu Leu Gly Val Cys Ala Val Gly Lys Pro Met Cys Leu Leu Phe Glu  
 645 650 655

Tyr Met Ala Tyr Gly Asp Leu Asn Glu Phe Leu Arg Ser Met Ser Pro  
 660 665 670

His Thr Val Cys Ser Leu Ser His Ser Asp Leu Ser Met Arg Ala Gln  
 675 680 685

Val Ser Ser Pro Gly Pro Pro Pro Leu Ser Cys Ala Glu Gln Leu Cys

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## Sequence Listing.ST25.txt

690	695	700
Ile Ala Arg Gln Val Ala Ala Gly Met Ala Tyr Leu Ser Glu Arg Lys 705	710	715 720
Phe Val His Arg Asp Leu Ala Thr Arg Asn Cys Leu Val Gly Glu Asn 725	730	735
Met Val Val Lys Ile Ala Asp Phe Gly Leu Ser Arg Asn Ile Tyr Ser 740	745	750
Ala Asp Tyr Tyr Lys Ala Asn Glu Asn Asp Ala Ile Pro Ile Arg Trp 755	760	765
Met Pro Pro Glu Ser Ile Phe Tyr Asn Arg Tyr Thr Thr Glu Ser Asp 770	775	780
Val Trp Ala Tyr Gly Val Val Leu Trp Glu Ile Phe Ser Tyr Gly Leu 785	790	795 800
Gln Pro Tyr Tyr Gly Met Ala His Glu Glu Val Ile Tyr Tyr Val Arg 805	810	815
Asp Gly Asn Ile Leu Ser Cys Pro Glu Asn Cys Pro Val Glu Leu Tyr 820	825	830
Asn Leu Met Arg Leu Cys Trp Ser Lys Leu Pro Ala Asp Arg Pro Ser 835	840	845
Phe Thr Ser Ile His Arg Ile Leu Glu Arg Met Cys Glu Arg Ala Glu 850	855	860
Gly Thr Val Ser Val		

<210> 3  
 <211> 20  
 <212> DNA  
 <213> homo sapiens

<400> 3  
 cagaaggaac ttcgtcctgc  
 20

<210> 4  
 <211> 20  
 <212> DNA

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Sequence Listing.ST25.txt

<213> homo sapiens

<400> 4

acatgcgttc cagaattcgg  
20

<210> 5

<211> 42

<212> DNA

<213> homo sapiens

<400> 5

cgaggcctgt cttcaacctt agacactcac agttccctct gc  
42

<210> 6

<211> 27

<212> DNA

<213> homo sapiens

<400> 6

cggcctgtgc cagactgcca catctag  
27

<210> 7

<211> 31

<212> DNA

<213> homo sapiens

<400> 7

cgtctagggtg aggggtactgc tgctgattct c  
31

<210> 8

<211> 38

<212> DNA

<213> homo sapiens

<400> 8

ggttaaccct attcaatggtt attccttgga tactccag  
38

<210> 9



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Sequence Listing.ST25.txt

<211> 24  
<212> DNA  
<213> homo sapiens

<400> 9  
cttccaaaag ctcctgtcat cacc  
24

<210> 10  
<211> 26  
<212> DNA  
<213> homo sapiens

<400> 10  
ccagtcattgg agtatgtagg tgagac  
26

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